

REMARKS

Claims 1-9 are pending. Claims 1-9 stand rejected. Claims 1 and 5 are independent claims.

Claims 1 and 5 stand rejected under 35 U.S.C. ' 103(a) as allegedly being obvious over Kim *et al.* (U.S. 5,680,410) in view of Glance *et al.* (U.S. 5,907,569).

Claim 1, as amended, recites, *inter alia*, “a driving means for applying a predetermined constant direct voltage to the thermistor and for controlling the temperature of the thermistor based on the environmental temperature.” Claim 5, as amended, recites a similar feature. Support for the amendment can be found at page 6, line 14-20.

As noted in the specification, a driving means, which is electrically coupled to the thermistor, enables the thermistor to maintain the operation temperature by applying a predetermined constant direct voltage and controlling the temperature of the thermistor based on the environmental temperature (Id., line 14-16). In particular, it is noted that a decrease in the ambient temperature increases the resistivity of the thermistor, as the resistivity of the thermistor is proportional to the ambient temperature (Id., line 16-20). Such a decrease in resistivity, meanwhile, increases the thermistor’s voltage intake or power consumption, which corresponds to the heating value and which is inversely proportional to the resistivity, from a driving means providing a predetermined constant direct voltage (See id., line 14-20). As such, a decrease in ambient temperature induces the thermistor to increase its voltage intake from the driving means and increase its temperature (Id., line 16-18). Conversely, an increase in ambient temperature results in increase in resistivity of the thermistor and a decrease in the voltage intake from the driving means, thereby decreasing the temperature of the thermistor (Id.).

Kim, as read by applicant, discloses a positive thermistor thermally coupled to the laser chip.

However, as the Office Action acknowledged, Kim fails to teach a driving means for applying a predetermined voltage to the thermistor, much less a driving means for applying a predetermined constant direct voltage to the thermistor to control the temperature of the thermistor based on the environmental temperature, as recited in new claims 1 and 5. Kim merely discloses that temperature of its thermistor is controlled by applying heating and cooling in **alternating intervals** (Column 4, line 4-6). As such, Kim fails to teach all features of claims 1 and 5, as amended.

Glance, as read by applicant, discloses a circuit that maintains the output power of an uncooled laser or light emitting diode. Glance, however, does not disclose a driving means for applying a predetermined constant direct voltage to the thermistor and controls the temperature of the thermistor based on the environmental temperature. Instead, Glance discloses a driving means that maintains the output power from a laser or light emitting diode by **controlling the amount of current input to the diode** with respect to change in environmental temperature (Abstract; column 1, line 47-55; column 3, line 42-63). As such, Glance also fails to teach all features of claim 1 and 5, as amended. As Kim and Glance, alone or in combination, fails to teach all features of new claims 1 and 5, two references, alone or in combination, do not render claims 1 and 5 obvious. Accordingly, applicant respectfully requests withdrawal of these rejections on claims 1 and 5.

Other claims in this application are each dependent on the independent claims 1 and 5, and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Amendment
Serial No. 10/665,269


Applicants submit that the claims 1-9, as they now stand, fully satisfy the requirements of 35 U.S.C. 103. In view of the foregoing amendments and remarks, favorable reconsideration and early passage to issue of the present application are respectfully solicited. Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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10/18/05


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